REPORTS ON THE MARGARET M. CARY–CARNEGIE MUSEUM EXPEDITION TO BAJA CALIFORNIA, MEXICO, 1961.

4. The Family Saturniidae (Lepidoptera)

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This is the fifth paper based on the Margaret M. Cary-Carnegie Museum Expedition to Baja California, Mexico, 1961, and the fourth to appear in the Annals of Carnegie Museum. For an account of the itinerary and description of localities see the first paper in this series (Richard M. Fox, 1963, Ann. Carnegie Mus., 36 (16): 181-192). Except as noted, all specimens including type series are in the collection of Carnegie Museum.

The members of the expedition caught representatives of seven species of Saturniidae. Four of these were taken in Sinaloa, and the other three in Baja California Sur. Of the latter, one species represents an endemic taxon, heretofore apparently known only from the unique type and a single female in the collection of the American Museum of Natural History. The second species is represented by an endemic subspecies, described in this paper, of a widely ranging taxon in the southwestern United States and Mexico. The third species is one that occurs across Mexico and extends north into Arizona; this is the first Baja California record for this moth.

Relatively few members of the Saturniidae have been recorded from Baja California. Hoffmann (1942) lists most of these, although he omitted two species cited by Bouvier (1932, 1936). The total number of species given in these articles is eight; one additional taxon is added in the present paper. Two endemic species, *Syssphinx digueti* (Bouvier) and *Hemileuca sororius* (Henry Edwards), are present on the peninsula. Two endemic subspecies have been named, one for *Saturnia*

Submitted for publication February 24, 1964
Issued April 8, 1966

galbina, in this paper, and *Hyalophora euryalus cedrosensis* (Cockerell), described from Cedros Island. Three additional members of the genus *Hemileuca* have been reported: *electra* Wright, which occurs in southern California and Sonora (Hoffmann, 1942); *nevadensis* Stretch (*californica* Wright), a species of the Great Basin area that reaches southern California; and *lex* (Druce), a taxon from central Mexico which Bouvier (1932: 410) reports as occurring in "Basse-Californie." The remaining two species are both large-sized members of the Saturniinae: *Hyalophora calleta* (Westwood), reported from Baja California for the first time in this paper, and *Rothschildia jorulla cincta* (Tepper), described from Arizona.

Much more collecting of this family is needed in Baja California. Several of the above references need checking when adequate material comes to hand. It is very possible that a number of species of Saturniidae occur in Baja California that have never been reported or described.

The generic terminology used in this paper is that of Michener (1952).

Subfamily CITHERONIINAE

Syssphinx (Bouvierina) heiligbrodti heiligbrodti (Harvey)

Anisota heiligbrodti Harvey, 1877:110.

The single specimen agrees well with three other males from Culiacán, Sinaloa. The nominate subspecies is also found in Tamaulipas and Coahuila, as well as in Texas.

SINALOA: 46 miles north of Los Mochis, Oct. 22, 1 ♂.

Syssphinx (Bouvierina) digueti (Bouvier)

Adelocephala digueti Bouvier, 1929:249, pl. 3, fig. 10.

This species was described from "Basse-Californie," without any further data, and was based on a single female specimen. The males are similar to the females, but smaller in size. In wing length the males range from 26 to 33 mm.; the females from 34 to 40 mm. In addition to the records given below, there is a single female in the collection of the American Museum of Natural History from San Felipe, Baja California Norte, Oct. 5, 1953 (Ryckman, Lee, and Ames). Apparently this species is endemic to Baja California.

BAJA CALIFORNIA SUR: Bahía de Palmas, Oct. 7, 1 ♂; San José del Cabo, Oct. 25, 1 ♂; La Paz: Guaycura Hotel grounds, Oct. 28, 1 ♂; Rancho Palmerito, Oct. 30, 1 ♂, Nov. 24, 1 ♂; Arroyo San Bernardo (Sierra Laguna), Nov. 13, 1 ♀, Nov. 17, 1 ♂; Boca de la Sierra, Nov. 17, 1 ♂, 1 ♀. (3 ♂, 1 ♀ AMNH).

Adeloneivaia pacifica (Schaus)

Adelocephala pacifica Schaus, 1911:627.

Three males were taken in Sinaloa that may be referable to this species. A dissection of the genitalia (F.H.R. no. 12,235) and a comparison with the male structures of *pacifica* and *irrorata* Schaus was not too helpful, as there did not appear to be many differences between the genitalia of these two taxa.

SINALOA: Concordia, Oct. 21, 1 ♂; 16 miles north of Mazatlán, Oct. 28, 2 ♂. (1 ♂ AMNH).

Subfamily HEMILEUCINAE

Automeris (Automeris) io mexicana Draudt

Automeris io mexicana Draudt, 1929:744, pl. 111Af.

Hoffmann (1942:239) gives the distribution of this subspecies as being from the valley of the Río Balsas, Guerrero, and the Pacific coast states as far as Sinaloa. The members of the expedition caught a series of seven specimens in Sinaloa, and they agree very well with other examples from that state and Guerrero.

SINALOA: 5 miles west of Concordia, Nov. 2, 6 ♂, 1 ♀. (3 ♂ AMNH).

Subfamily SATURNIINAE

Saturnia (Agapema) galbina *pelora*, new subspecies

This subspecies is the largest and among the palest of the several named populations of *galbina*.

MALE: Upper surface of forewings dark gray or grayish black; pattern as in nominate *galbina*, with broad white t. a., t. p., and subterminal bands; t. a. and t. p. lines 1 to 2 mm. in width; inner side of s. t. line 3 to 4 mm. from wing margin, with small outward teeth on veins in upper part of wing only, and with terminal area light gray; apex of forewing with prominent reddish black dash, with red scaling recurving on costa. Hind wings white with broad, dark gray, extra discal band, and with faint trace of median line only; subterminal band white, broad, 2 to 3 mm.

from wing margin, with very small outward teeth on veins; terminal areas as on forewings; eye spots on all wings similar to those of nominate subspecies.

UNDER-SURFACE OF WINGS: Similar to those of nominate *galbina* but paler, with more extensive areas of white and pale gray; maculation like that of upper surface but with gray areas reduced.

LENGTH OF FOREWING: 32 to 36 mm.; holotype, 35 mm.

FEMALE: Unknown.

TYPES: Holotype, male, Mexico: Baja California Sur: Puerto Chileno, November 25, 1961. Paratypes, both from Baja California Sur: Rancho Palmarito, December 3, 1961 (ultraviolet light), 1 ♂; La Paz: Guaycura Hotel grounds, December 4, 1961, 1 ♂. The holotype is in the collection of the Carnegie Museum; paratypes are in the collections of that institution and of the American Museum of Natural History.

REMARKS: The three specimens of the type series are the largest in size of any male *galbina* examined by the author. Male specimens of this species had the following measurements of wing length:

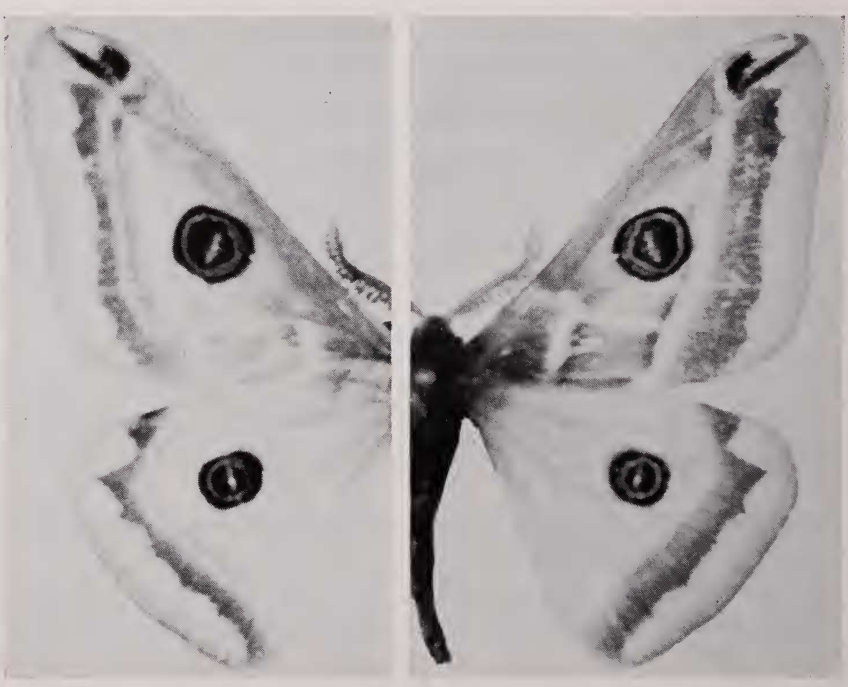

Fig. 1. *Saturnia* (*Agapema*) *galbina pelora,* new subspecies. Holotype ♂, Puerto Chileno, Baja California Sur, Mexico, November 25, 1961. Upper side at right, under side at left.

LOCALITY	NUMBER	RANGE	AVERAGE
South Texas	23	25-30 mm.	28.1 mm.
West Texas	13	25-30	27.7
New Mexico	5	24-29	27.0
Arizona	20	25-30	28.0
Durango	14	25-31	28.4
Baja California	3	32-36	34.3

In addition to the large size, this population is one of the lightest in color of this species. This, in part, is because of the extensive white areas and the broad cross lines of the forewing, and also because the dark color of the wings is a gray or grayish black. Most of the populations have this color more or less suffused with dark brown or blackish brown, and this gives a different tint to the wings.

The genitalia were not dissected. Enough could be seen of the outer margin of the valves to verify the presence of the protuberance that is present in *galbina* but absent in *homogena* Dyar.

Bouvier (1936:171) cites *galbina* as occurring in "Basse-Californie," but does not discuss the matter further. It is not known what material he had for this record.

Hyalophora (Eupackardia) calleta calleta (Westwood)

Saturnia calleta Westwood, 1853:161, pl. 33, fig. 2.

The nominate subspecies, with the wide white band on the upper surface of the wings, is found in central and southern Mexico between the elevations of 3000 and 6000 feet (Hoffmann, 1942:235). The single female taken on this trip is the first Baja California record; the specimen was taken at a much lower altitude than those given by Hoffmann.

BAJA CALIFORNIA SUR: Rancho Palmarito, Nov. 4, 1 ♀.

Rothschildia jorulla jorulla (Westwood)

Saturnia jorulla Westwood, 1853:159, pl. 32, fig. 1.

This species has a widespread distribution in Mexico.

SINALOA: 18 miles north of Mazatlán, Oct. 29, 1 ♀.

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